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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/403,090	12/10/1999	LASSE LEIRFALL	00035/101687	6826

7590 07/31/2002

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2033 K STREET NW SUITE 800  
WASHINGTON, DC 20006

EXAMINER
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NGUYEN, TU T

ART UNIT	PAPER NUMBER
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2877

DATE MAILED: 07/31/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/403,090

Applicant(s)

LEIRFALL, LASSE

Examiner

Tu T Nguyen

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 10 May 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 6-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 12 and 13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

Detailed Office Action

*Election/Restriction*

Applicant's election without traverse of species 1 (claims 1-5, 12-13) in Paper No. 10 is acknowledged.

*Claim Objections*

Claims 1,2,13 are objected to because of the following informalities:

In claim 13, line 2, the term "warnng" should be corrected to "warning".

In claim 1, line 1 and claim 2, line 1, line 3, the measuring device (8-9, and 17,18) are not illustrated in the drawings.

*Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-3, 4-5, 12-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

1) Claims 1, 2, claim the use of "a measuring device" and of "an indicator". However,

claim 1 does not teach any steps of how to use the “measuring device” and of the “indicator” device.

2) Claim 1, line 5, the claimed “for monitoring a contaminated, dirty or inflammable condition” does not seem related to the claimed “for measuring a parameter indicating amount of dust deposited on a surface”. It is not clear how the knowledge of the amount of dust could help determining contaminated, dirty and inflammable condition.

3) Regarding claims 1, line 6; claim 2, line 5, the phrase "for example" or “e.g” renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

4) In claim 4, lines 2-3; claim 5, line 2; claim 13, line 3, the term “possibly” renders the claims indefinite because it is not clear if the limitation following the term “possibly” is part of the claim.

5) The term "substantially" in claim 5, line 1 is a relative term which renders the claim indefinite. The term "substantially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is not clear how much the light beam could be deflected from the transverse direction.

6) In claim 12, line 2, the claimed “on an analog scale or by digital display” does not seem to be the correct alternative because the “scale” and the “display” are of different kind, they can not be alternatively selected.

7) Claim 3 is rejected as being dependent on the rejected base claim 2.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bruce (4,815,856).**

With respect to claim 1, Bruce discloses a method for measuring a dust thickness (abstract) on the surface. The method comprises: a measuring device 10 (fig 4).

Bruce does not explicitly disclose measuring dust in an electrical consumer appliance. However, it would have been obvious to modify Bruce’s system to use for the electrical consumer appliance to prevent the build up dust in the appliance which make the appliance have a longer time span. The modification involves only routine skill in the art.

**Claims 2,4-5,12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bruce (4,815,856) in view of Venkatesh et al (5,646,734).**

With respect to claim 2, refer to discussion above in claim 1 for measuring the amount of dust on the appliance.

Bruce discloses measuring the amount of dust by detecting the beam transmitted through the dust A,B,C (fig 1). Bruce does not disclose measuring attenuation of a light to determine the thickness of dust. Venkatesh discloses a method for measuring the thickness of a film by measuring attenuation of a light beam transmitted through a film (column 1, lines 35-40). It would have been obvious to combine Bruce with Venkatesh's method to make the system faster.

With respect to claim 4, Bruce disclose an expanded light beam (abstract). Further, Bruce discloses a lens (fig 1) for focusing the light to the detector E (fig 1).

With respect to claim 5, Bruce does not discloses transmitting the light beam transversely to the dust layer. Using a transverse light beam would have been well known in the art. It would have been obvious to substitute Bruce's light beam to the well known transverse beam to make the system more accurate. Further, Bruce disclose passing an expanded light beam twice in the dirt layer L (fig 1) (abstract) before detection.

With respect to claim 12, Bruce discloses sending the signal to a display (video, fig 4).

**Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bruce (4,815,856) in view of Venkatesh et al (5,646,734) and further in view of Hyun et al (4,691,106).**

With respect to claim 3, Bruce in view of Venkatesh do not disclose a reference light beam. Hyun discloses determining dirt on the surface (abstract) by comparing the reference beam 7 (fig 1) and the measured beam 7' (fig 1). It would have been obvious to modify Bruce with Hyun's method to make the system easier to detect the dirt.

**Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bruce (4,815,856) in view of Venkatesh et al (5,646,734) and further in view of Shinpei (JP 09-292305).**

With respect to claim 13, Bruce in view of Venkatesh do not disclose an alarm to indicate the exceeding of a threshold value. Shinpei discloses an alarm 9 (fig 5). It would have been obvious to combine Bruce with Shinpei's alarm to indicate the user when the dirt exceed a threshold.

### ***Response to Arguments***

Applicant's argument on novel & inventive of the present applicant over the US 4,402,607. However, independent claims 1-2 do not explicitly disclose the difference between the industrial dust monitoring & the electric consumer appliance's dust monitor to highlight inventive feature of the dust monitor of the present application.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tu T Nguyen whose telephone number is (703) 306-9185. The examiner can normally be reached on M-T 7:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G Font can be reached on (703) 308-4881. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

A handwritten signature in black ink, appearing to read 'T. Nguyen', with a long, sweeping horizontal stroke extending to the right.

**Tu Tuan Nguyen**  
**Patent Examiner TC 2877**  
**July 27, 2002/TTN**